West Virginia Department of Health and Human Resources Information for Workers Performing Brainstem Extraction for Active Surveillance– Rabies in Wildlife

What is rabies?

Rabies is a viral disease that affects the brain and spinal cord. It can infect all warm blooded animals, though the disease is typically maintained by carnivores.

Raccoon-strain-rabies (RSR) is the most common type of rabies in West Virginia.

What animals are most likely to carry rabies in West Virginia?

Most case of wildlife rabies occur in raccoons, skunks, foxes, and bats. Spill over of RSR into less common species has also occurred in West Virginia, including wildlife (bobcats, ground hogs), domestic animals (cats, dogs), and livestock (horses, cows).

What are the signs of rabies?

There are two classic forms of the disease: "dumb rabies" and "furious rabies." Animals with dumb rabies are unusually calm and sedate. They show signs such as aimless wandering, stumbling, and they generally appear disoriented. Nocturnal wildlife found wandering during the daytime are considered suspicious for rabies. Animals with furious rabies engage in aggressive behavior without being provoked. They may attack both animate (dogs and people) and inanimate objects (cars and capture poles). The unusual act of a raccoon attacking a dog has been reported as a significant indicator of rabies. Increased salivation, convulsions, and coma are common signs of the later stages of the disease.

How do I know if I have been exposed to rabies?

A rabies exposure means: 1) A bite from a rabid animal; 2) Direct contact between saliva or neural tissue (brain or spinal cord or spinal fluid) from a rabid animal with a recent cut in the skin (e.g., if you cut yourself while performing the brainstem extraction); or 3) Direct contact between saliva or neural tissue from a rabid animal and the moist lining of the eyes, nose, or mouth. Over 99% of all human rabies cases occur as the result of a bite-related exposure. Non-bite exposures, such as saliva in the eye, present a markedly lower risk.

Simply touching the fur, urine, feces, or blood of a rabid animal is not considered a rabies exposure. In any case, always wear gloves when working with wild carnivores, and clean hands with soap and water when work is complete.

What should I do if I think I have been exposed to rabies?

If exposed by a potentially rabid animal, immediately wash the site thoroughly with soap and water (minimum of five minutes). This is one of the most effective steps in preventing viral infection.

- Report the incident to a supervisor.
- Seek medical attention to evaluate the need for antibiotics, tetanus boosters, and/or rabies vaccine as soon as possible.
- All suspect rabies exposures should be reported to the local health department in accordance with state law. Your local health department can counsel you on the need for treatment, and help you get the animal tested for rabies.
- Capture and contain the animal if possible, but do not risk further injury if the animal is dangerous.
- If killing the animal is necessary, trauma to the head should be avoided.
- Submit the **entire** animal head (not just the brainstem sample) to the Office of Laboratory Services for rabies testing

How can I know for certain if an animal was rabid?

The only way to determine if a wild animal is rabid is to submit the **entire** animal head for rabies testing (brainstem samples are not sufficient for diagnosis in a human exposure situation). In the event the animal cannot be captured, circumstantial information can be used to assess risk following an exposure. Information about species, location of the incident, and if the bite was provoked or unprovoked contribute to assessing risk. Contact your local health department for information and instructions on submission of samples for rabies testing.

What is pre-exposure vaccination and who should receive it?

Persons collecting brainstem specimens for RSR active surveillance and those at high risk for rabies exposure (such as rabies laboratory staff) should receive pre-exposure vaccination. Pre-exposure vaccination consists or three 1.0-mL injections of rabies vaccine administered intramuscularly (deltoid area) — one injection per day on days 0*, 7, and 21 or 28 (*day 0 is the day of the first dose of vaccine administered).

(Persons who receive pre-exposure vaccination should have their immune titers checked every 2 years and receive booster vaccination if titers fall bellow the minimum cut off for the laboratory where testing occurred. Rabies titer testing should be coordinated through the Local Health Department)

Post-exposure therapy for previously vaccinated persons

If exposed to rabies, previously vaccinated persons should receive two IM doses (1.0 mL each) of vaccine, one immediately and one 3 days later. Previously vaccinated persons are those who have received one of the recommended pre-exposure or post-exposure regimens of HDCV, RVA, or PCEC, or those who received another vaccine and had a documented rabies antibody titer. Rabies Immune Globulin (RIG) is unnecessary and should not be administered to these persons.